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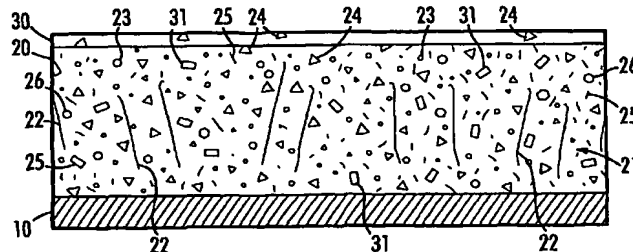
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(54) Title: THICK RADIATION SENSITIVE DEVICES



(57) Abstract: Described is radiation sensitive imaging and dosimeter composition (20) containing a radiation sensitive material (21), e.g., a diacetylene ( $R-C\equiv C-C\equiv C-R'$ , where R and R' are substituent groups) or a radiochromic dye, a polymeric binder (22) and optionally a solvent (23) and/or an activator (24). Radiation sensitive materials are incorporated into a moldable or castable material and are molded or casted into shaped-articles (100), such as coatings, films, fiber, plaques, rods and blocks. Upon exposure to high-energy radiations, radiation sensitive material develops color thereby producing a visible image. Because of the higher thickness, a significantly lower dose of radiation can be monitored and an image is produced in three dimensions. Materials, processes and usages for thick radiation sensitive devices are described. A thick block can be used for monitoring radiation dosages in the three dimensions.